

PHYSICS AND ASTRONOMY CLASSIFICATION SCHEME (PACS)

Shortened version for use in classifying papers for Applied Physics

General

- 02 Mathematical methods in physics
- 06 Measurement science and metrology
- 07 Specific instrumentation
 - 07.60 Optical instruments and techniques, detection of radiation
 - 07.65 Optical spectroscopy and spectrometers
 - 07.75 Mass spectrometers and mass-spectroscopy techniques
 - 07.80 Electron and ion microscopes and spectrometers; techniques
 - 07.85 X-ray and gamma-ray instruments and techniques

Atomic and molecular physics

- 32 Atomic spectra and interactions with photons
- 33 Molecular spectra and interactions of molecules with photons
- 34 Atomic and molecular collision processes and interactions
- 35 Experimentally derived information on atoms and molecules
- 36 Studies of special atoms and molecules (macro- and polymer molecules, clusters)

Fundamental areas of phenomenology (including applications)

- 41 Electricity and magnetism
- 42 Optics (*see also* 78)
 - 42.10 Propagation and transmission in homogeneous media
 - 42.20 Propagation and transmission in inhomogeneous media
 - 42.30 Optical information, image formation and analysis
 - 42.40 Holography
 - 42.50 Quantum optics
 - 42.55 Laser processes
 - C Pumping mechanisms
 - E Molecular gas lasers (CO_2 , CO, N_2O , formaldehyde)
 - G Excimer lasers
 - H Atomic, ionic, and other gas lasers
 - M Laser action in liquids and organic dyes
 - P Laser action in semiconductors
 - R Laser action in solid-state lasers
 - T Free-electron lasers
 - 42.60 Laser systems and laser-beam applications
 - B Design of specific laser systems
 - D Laser resonators, cavities, and amplifiers
 - E Laser beam deflection and focusing
 - F Laser beam modulation, mode locking, and tuning
 - 42.65 Nonlinear optics
 - 42.68 Atmospheric optics
 - 42.70 Optical materials
 - 42.80 Optical devices, techniques, and applications (including fiber and integrated optics)
- 43 Acoustics (*see also* 62)

Fluids, plasmas, and electric discharges

- 52 Physics of plasmas and electric discharges

Condensed matter: structure, mechanical and thermal properties

- 61 Structure of liquids and solids; crystallography (*for surface structure, see 68.35; for thin-film structure, see 68.55*)
 - 61.10 Determination of structures
 - 61.12 Neutron determination of structures
 - 61.14 Electron determination of structures
 - 61.16 Other determination of structures
 - 61.20 Liquid structures
 - 61.30 Liquid crystals
 - 61.40 Amorphous and polymer materials, glasses
 - 61.70 Defects in crystals
 - 61.80 Radiation damage and other irradiation effects
- 62 Mechanical and acoustical properties of condensed matter
- 63 Lattice dynamics and crystal statistics
- 64 Phase equilibria, and phase transitions
- 65 Thermal properties of condensed matter
- 66 Transport properties of condensed matter (nonelectronic)
 - 66.30 Diffusion and ionic conduction in solids

68 Surfaces and interfaces; thin films and whiskers

- 68.10 Fluid surfaces and fluid-fluid interfaces
- 68.15 Liquid thin films
- 68.35 Solid surfaces and solid-solid interfaces (including bicrystals)
- 68.45 Solid-fluid interfaces
- 68.55 Thin films: growth, structure, epitaxy and nonelectronic properties
- 68.65 Layer structures, intercalation compounds, and superlattices: growth, structure, and nonelectronic properties
- 68.70 Whiskers and dendrites: growth, structure, and nonelectronic properties

Condensed matter: electronic structure, electrical, magnetic, and optical properties

- 71 Electron states
- 72 Electronic transport
 - 72.15 Electronic phenomena in metals and alloys
 - 72.20 Conductivity phenomena in semiconductors and insulators
 - 72.40 Photoconduction and photovoltaic effects
 - 72.50 Acoustoelectric effects
 - 72.60 Mixed conductivity and conductivity transitions
 - 72.70 Noise processes and phenomena
- 73 Electronic structure and electrical properties of surfaces, interfaces, and thin films
 - 73.20 Electronic surface states
 - 73.25 Surface conductivity
 - 73.30 Surface double layers, Schottky barriers, and work functions
 - 73.40 Interfaces
 - 73.60 Electronic properties of thin films
- 74 Superconductivity
 - 74.70 Superconducting materials
- 75 Magnetic properties and materials
 - 75.70 Magnetic films and plates
- 76 Magnetic resonances and relaxation; Mössbauer effect
- 77 Dielectric properties and materials
 - 77.55 Dielectric thin films
- 78 Optical properties
 - 78.30 Infrared and Raman spectra
 - 78.65 Optical properties of thin films
 - 78.70 X-ray spectra and positron annihilation
- 79 Electron and ion emission by liquids and solids; impact phenomena
 - 79.20 Impact phenomena (including electron spectra and sputtering)
 - 79.40 Thermionic emission
 - 79.60 Photoemission and photoelectron spectra
 - 79.70 Field emission and field ionization

Cross-disciplinary physics

- 81 Materials science
 - 81.10 Methods of crystal growth and purification
 - 81.15 Methods of thin-film deposition
 - Z Laser deposition methods
 - 81.40 Treatment of materials and its effect on microstructure and properties
 - Z Laser machining
 - 81.60 Corrosion, oxidation, and surface treatments
 - Z Laser techniques, including ablation
- 82 Physical chemistry
 - 82.20 Chemical kinetics and chemical reactions
 - 82.30 Specific chemical reactions; reaction mechanisms
 - 82.40 Chemical kinetics and reactions: special regimes and techniques
 - Z Laser-induced reactions
 - 82.45 Electrochemistry and electrophoresis
 - 82.50 Photochemistry and radiation chemistry
 - 82.65 Surface processes
 - 82.70 Dispersive systems
 - 82.80 Chemical analysis and related physical methods of analysis
- 84 Electromagnetic technology
 - 84.60 Direct energy conversion and energy storage
- 85 Electrical and magnetic devices
 - 85.30 Semiconductor devices
 - 85.40 Integrated electronics
 - 85.60 Photoelectric and optoelectronic devices and systems
 - 85.80 Electrochemical, thermo-EM, and other devices
- 87 Biophysics (biological effects of radiation)

A classified index for Volumes 1-25 can be found in Appl. Phys. 25, 367-453 (1981), one for Volume 26-40 in Appl. Phys. A 40/4 (August 1986), and an earlier index for Volumes 1-15 at the end of Appl. Phys. 15, (May 1978)

PHYSICS AND ASTRONOMY CLASSIFICATION SCHEME (PACS)

Shortened version for use in classifying papers for Applied Physics

General

- 02 Mathematical methods in physics
- 06 Measurement science and metrology
- 07 Specific instrumentation
 - 07.60 Optical instruments and techniques, detection of radiation
 - 07.65 Optical spectroscopy and spectrometers
 - 07.75 Mass spectrometers and mass-spectroscopy techniques
 - 07.80 Electron and ion microscopes and spectrometers; techniques
 - 07.85 X-ray and gamma-ray instruments and techniques

Atomic and molecular physics

- 32 Atomic spectra and interactions with photons
- 33 Molecular spectra and interactions of molecules with photons
- 34 Atomic and molecular collision processes and interactions
- 35 Experimentally derived information on atoms and molecules
- 36 Studies of special atoms and molecules (macro- and polymer molecules, clusters)

Fundamental areas of phenomenology (including applications)

- 41 Electricity and magnetism
- 42 Optics (*see also* 78)
 - 42.10 Propagation and transmission in homogeneous media
 - 42.20 Propagation and transmission in inhomogeneous media
 - 42.30 Optical information, image formation and analysis
 - 42.40 Holography
 - 42.50 Quantum optics
 - 42.55 Laser processes
 - C Pumping mechanisms
 - E Molecular gas lasers (CO_2 , CO, N_2O , formaldehyde)
 - G Excimer lasers
 - H Atomic, ionic, and other gas lasers
 - M Laser action in liquids and organic dyes
 - P Laser action in semiconductors
 - R Laser action in solid-state lasers
 - T Free-electron lasers
 - 42.60 Laser systems and laser-beam applications
 - B Design of specific laser systems
 - D Laser resonators, cavities, and amplifiers
 - E Laser beam deflection and focusing
 - F Laser beam modulation, mode locking, and tuning
 - 42.65 Nonlinear optics
 - 42.68 Atmospheric optics
 - 42.70 Optical materials
 - 42.80 Optical devices, techniques, and applications (including fiber and integrated optics)
- 43 Acoustics (*see also* 62)

Fluids, plasmas, and electric discharges

- 52 Physics of plasmas and electric discharges

Condensed matter: structure, mechanical and thermal properties

- 61 Structure of liquids and solids; crystallography (*for surface structure, see 68.35; for thin-film structure, see 68.55*)
 - 61.10 Determination of structures
 - 61.12 Neutron determination of structures
 - 61.14 Electron determination of structures
 - 61.16 Other determination of structures
 - 61.20 Liquid structures
 - 61.30 Liquid crystals
 - 61.40 Amorphous and polymer materials, glasses
 - 61.70 Defects in crystals
 - 61.80 Radiation damage and other irradiation effects
- 62 Mechanical and acoustical properties of condensed matter
- 63 Lattice dynamics and crystal statistics
- 64 Phase equilibria, and phase transitions
- 65 Thermal properties of condensed matter
- 66 Transport properties of condensed matter (nonelectronic)
 - 66.30 Diffusion and ionic conduction in solids

68 Surfaces and interfaces; thin films and whiskers

- 68.10 Fluid surfaces and fluid-fluid interfaces
- 68.15 Liquid thin films
- 68.35 Solid surfaces and solid-solid interfaces (including bicrystals)
- 68.45 Solid-fluid interfaces
- 68.55 Thin films: growth, structure, epitaxy and nonelectronic properties
- 68.65 Layer structures, intercalation compounds, and superlattices: growth, structure, and nonelectronic properties
- 68.70 Whiskers and dendrites: growth, structure, and nonelectronic properties

Condensed matter: electronic structure, electrical, magnetic, and optical properties

- 71 Electron states
- 72 Electronic transport
 - 72.15 Electronic phenomena in metals and alloys
 - 72.20 Conductivity phenomena in semiconductors and insulators
 - 72.40 Photoconduction and photovoltaic effects
 - 72.50 Acoustoelectric effects
 - 72.60 Mixed conductivity and conductivity transitions
 - 72.70 Noise processes and phenomena
- 73 Electronic structure and electrical properties of surfaces, interfaces, and thin films
 - 73.20 Electronic surface states
 - 73.25 Surface conductivity
 - 73.30 Surface double layers, Schottky barriers, and work functions
 - 73.40 Interfaces
 - 73.60 Electronic properties of thin films
- 74 Superconductivity
 - 74.70 Superconducting materials
- 75 Magnetic properties and materials
 - 75.70 Magnetic films and plates
- 76 Magnetic resonances and relaxation; Mössbauer effect
- 77 Dielectric properties and materials
 - 77.55 Dielectric thin films
- 78 Optical properties
 - 78.30 Infrared and Raman spectra
 - 78.65 Optical properties of thin films
 - 78.70 X-ray spectra and positron annihilation
- 79 Electron and ion emission by liquids and solids; impact phenomena
 - 79.20 Impact phenomena (including electron spectra and sputtering)
 - 79.40 Thermionic emission
 - 79.60 Photoemission and photoelectron spectra
 - 79.70 Field emission and field ionization

Cross-disciplinary physics

- 81 Materials science
 - 81.10 Methods of crystal growth and purification
 - 81.15 Methods of thin-film deposition
 - Z Laser deposition methods
 - 81.40 Treatment of materials and its effect on microstructure and properties
 - Z Laser machining
 - 81.60 Corrosion, oxidation, and surface treatments
 - Z Laser techniques, including ablation
- 82 Physical chemistry
 - 82.20 Chemical kinetics and chemical reactions
 - 82.30 Specific chemical reactions; reaction mechanisms
 - 82.40 Chemical kinetics and reactions: special regimes and techniques
 - Z Laser-induced reactions
 - 82.45 Electrochemistry and electrophoresis
 - 82.50 Photochemistry and radiation chemistry
 - 82.65 Surface processes
 - 82.70 Dispersive systems
 - 82.80 Chemical analysis and related physical methods of analysis
- 84 Electromagnetic technology
 - 84.60 Direct energy conversion and energy storage
- 85 Electrical and magnetic devices
 - 85.30 Semiconductor devices
 - 85.40 Integrated electronics
 - 85.60 Photoelectric and optoelectronic devices and systems
 - 85.80 Electrochemical, thermo-EM, and other devices
- 87 Biophysics (biological effects of radiation)

A classified index for Volumes 1-25 can be found in Appl. Phys. 25, 367-453 (1981), one for Volume 26-40 in Appl. Phys. A 40/4 (August 1986), and an earlier index for Volumes 1-15 at the end of Appl. Phys. 15, (May 1978)

Contents of Applied Physics A 48

This listing presents the papers in alphabetical order of the first author, subdivided according to the groupings "Solids and Materials" and "Surfaces, Interfaces, and Layer Structures". The author index that follows covers **Applied Physics A** and **B**, and is presented in tabular form. The names are listed in alphabetical order in the first column. The second column together with the third one contains the bibliographic data necessary to locate the paper. The issue is specified by the number separated from the volume number by a slash. The fourth column states the major PACS number so that the topic of the paper can be inferred by consulting the PACS listing on the left page.

Solids and Materials

- Abdelmohsen N., Labib H.H.A., Abou El-Ela A.H., Elsayed S.N.:
Electrical properties and thermal conductivity of AgTiTe_3 in the solid and liquid phases.
Appl. Phys. A 48/3, 251-253 (1989) PACS: 72.20
- Abe Y.:
Dynamical Hopf bifurcation in piezoelectric semiconductor resonators.
Appl. Phys. A 48/2, 177-180 (1989) PACS: 72.20H 43.25 72.80
- Aktas G., Cil C.Z., Aktulga E.:
Sensitivity analysis of the modulated photocurrent method.
Appl. Phys. A 48/3, 237-240 (1989) PACS: 72.40
- Aktulga E., Zaim Cil C., Aktas G.:
Phase shift analysis of modulated photocurrent: A new approach to determining the energy scale.
Appl. Phys. A 48/6, 517-520 (1989) PACS: 72.40
- Aoki K., Yamamoto K.:
Nonlinear response and chaos in semiconductors induced by impact ionization.
Appl. Phys. A 48/2, 111-125 (1989) PACS: 72.20H 05.45
- Aoki K., Mugibayashi N.:
Bifurcation phenomena in a periodically driven current filament and a conjecture on the turbulent patterns by computer simulations.
Appl. Phys. A 48/2, 161-169 (1989) PACS: 72.20H 05.45
- Baliga S., Jain A.L.:
Effect of compositional variation on the properties of Y-Ba-Cu-O compounds.
Appl. Phys. A 48/5, 419-422 (1989) PACS: 74.70
- Banerjee J.P., Pati S.P., Roy S.K.:
High frequency characterisation of double drift region InP and GaAs diodes.
Appl. Phys. A 48/5, 437-443 (1989) PACS: 85.30
- Brass S.G., Ghandehari M.H.:
The effect of oxygen ordering through controlled exposure to oxygen on the superconductive properties of $\text{LaBa}_2\text{Cu}_3\text{O}_y$.
Appl. Phys. A 48/4, 401-404 (1989) PACS: 74.70
- Brunner A.J., Ma E., Nicolet M.-A.:
Silicide formation by furnace annealing of thin Si films on large-grained Ni substrates.
Appl. Phys. A 48/3, 229-232 (1989) PACS: 61.70N 68.90 81.90
- Cabanski W., Schulz M.:
Tunneling current-voltage characteristics of Ti-silicide/p-Si/p⁺Si Schottky diodes.
Appl. Phys. A 48/3, 203-210 (1989) PACS: 71.20 73.40 73.30
- Castaldini A., Cavallini A., Poggi A., Susi E.:
The electrical activity of stacking faults in Czochralski silicon.
Appl. Phys. A 48/5, 431-436 (1989) PACS: 72.20J 61.70
- Chakrabarti P., Choudhury S.C., Pal B.B.:
Noise characteristics of a superlattice avalanche photodiode.
Appl. Phys. A 48/4, 331-334 (1989) PACS: 72.70 79.20 85.60
- Chantre A.:
Introduction to defect bistability.
Appl. Phys. A 48/1, 3-9 (1989) PACS: 61.70 71.00
- Cho H.Y., Kim E.K., Min S.-K., Choh S.H.:
Isothermal capacitance transient spectroscopy (ICTS) study for midgap levels in Hb-GaAs by rapid thermal annealing.
Appl. Phys. A 48/4, 359-363 (1989) PACS: 61.70A 71.55
- Corbel C., Bernède P., Pascard H., Rullier-Albenque F., Korman R., Marucco J.F.:
Positron annihilation at defects in sintered high- T_c perovskite superconductors.
Appl. Phys. A 48/4, 335-341 (1989) PACS: 74.70 78.70 61.70
- D'Anna E., Leggieri G., Luches A., Luby S., Zemek J.:
Pulsed laser synthesis of titanium silicides using a Q-switched Nd:glass laser.
Appl. Phys. A 48/6, 503-507 (1989) PACS: 68.55 79.20 82.50
- Dietrich T.R., Chiussi S., Stafast H., Comes F.J.:
ArF laser CVD of hydrogenated amorphous silicon: The role of buffer gases.
Appl. Phys. A 48/5, 405-414 (1989) PACS: 81.15G 82.50 73.60
- Dobrovolskis Z., Grigoras K., Krotkus A.:
Measurement of the hot-electron conductivity in semiconductors using ultrafast electric pulses.
Appl. Phys. A 48/3, 245-249 (1989) PACS: 72.20
- Doka O., Miklos A., Lörincz A.:
Resolution of nonlinear thermal wave microscopes.
Appl. Phys. A 48/5, 415-417 (1989) PACS: 73.00 78.00 65.00
- Engelmann H., Mouahid F., Dézi I., Molnár B., Gonser U., Siebert D., Dahlem J., Tuczek F.:
A Mössbauer and ESR study of $\text{LiNbO}_3\text{-Fe}_2\text{O}_3$ for low Fe_2O_3 concentrations.
Appl. Phys. A 48/3, 211-217 (1989) PACS: 64.75 76.80 81.30 81.40
- Fujii K., Ohya T., Otsuka E.:
Magnetic field dependence of spontaneous oscillation in n-InSb.
Appl. Phys. A 48/2, 189-191 (1989) PACS: 72.20H
- Fukuda K., Kohsaka R., Nomura K., Sambongi T.:
Metastable state of sliding CWD in $\text{K}_2\text{O}_3\text{MoO}_3$.
Appl. Phys. A 48/2, 171-175 (1989) PACS: 72.15N 72.15 72.70
- Ghatak K.P., Chattopadhyay N., Mondal M.:
On the gate capacitance of MOS structures in N-channel inversion layers on ternary chalcopyrite semiconductors.
Appl. Phys. A 48/4, 365-371 (1989) PACS: 73.20 73.25 73.40
- Ghezzi C., Gombia E., Mosca R., Pillan M.:
Electron traps and positive DLTS signals in VPE GaAs MESFETs.
Appl. Phys. A 48/5, 457-463 (1989) PACS: 71.55 85.30
- Gislason H.P.:
Triplet bound excitons in copper-doped gallium phosphide.
Appl. Phys. A 48/1, 11-24 (1989) PACS: 71.55E 76.30 78.55
- Gładyszewski G., Mikolajczak P.:
A new method for studying ion beam mixing.
Appl. Phys. A 48/6, 521-526 (1989) PACS: 61.10 61.55 68.48
- Gösele U., Ahn K.-Y., Marioton B.P.R., Tan T.Y., Lee S.-T.:
Do oxygen molecules contribute to oxygen diffusion and thermal donor formation in silicon?
Appl. Phys. A 48/3, 219-228 (1989) PACS: 61.70 66.30 85.3G
- Griffin J.A., Hartung J., Weber J., Navarro H., Genzel L.:
Photothermal ionisation spectroscopy of oxygen-related shallow defects in crystalline silicon.
Appl. Phys. A 48/1, 41-47 (1989) PACS: 61.70 78.30 72.40
- Hofmann D., Müller G., Streckfuß N.:
Semi-insulating electrical properties of undoped InP after heat treatment in a phosphorus atmosphere.
Appl. Phys. A 48/4, 315-319 (1989) PACS: 72.80E
- Huebener R.P., Peinke J., Parisi J.:
Experimental progress in the nonlinear behavior of semiconductors.
Appl. Phys. A 48/2, 107-110 (1989) PACS: 05.45 72.20 72.70
- Huguenin D., Moser P.:
Temperature effect on positron trapping in $\text{Fe}_{50}\text{Ni}_{25}\text{Cr}_{15}$ alloy containing voids.
Appl. Phys. A 48/6, 583-585 (1989) PACS: 61.70 71.60 78.70
- Irion E., Bürger N., Kürner W., Thonke K., Sauer R., Zulehner W., Pensl G.:
Photoluminescence study of acceptor-carbon complexes in irradiated silicon: Aluminum-related defects.
Appl. Phys. A 48/1, 25-30 (1989) PACS: 71.55H 78.55
- Itoh T., Uchikawa H.:
The Ti-Ba-Ca-Cu-O superconducting ceramics containing Al_2O_3 .
Appl. Phys. A 48/4, 321-323 (1989) PACS: 74.70 74.60
- Kellogg G.L., Brenner S.S.:
Atomic-level studies of superconducting and nonsuperconducting $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$.
Appl. Phys. A 48/3, 197-201 (1989) PACS: 74.70V 61.16 79.70

- Kielczynski P., Pajewski W.:
Inverse method for determining the depth of nonhomogeneous surface layers in elastic solids from the measurements of the dispersion curves of group velocity of surface SH waves.
Appl. Phys. A 48/5, 423-429 (1989) PACS: 62.30 68.35
- Lakshmikummar S.T., Rastogi A.C.:
Nature of contact resistance in High- T_c $YBa_2Cu_3O_{7-x}$ superconductors.
Appl. Phys. A 48/4, 325-329 (1989) PACS: 74.40Y 73.40 73.90
- Li J.N., Kadowaki K., Menken M.J.V., Huang Y.K., Bakker K., Menovsky A.A., Franse J.J.M.:
Weak links in the superconducting transition of multiphase Bi-Ca-Sr-Cu-O compounds.
Appl. Phys. A 48/2, 193-195 (1989) PACS: 74.70 74.50
- Marshall D.B., DeWames R.E., Morgan P.E.D., Ratto J.J.:
Flux penetration in high- T_c superconductors: Implications for magnetic suspension and shielding.
Appl. Phys. A 48/1, 87-91 (1989) PACS: 74.60G 82.25 74.30
- Mbungu-Tsumbu N., Dauwe C., Diatezua M.D., Mbosei L., Motoko K.:
Time and temperature dependent three-quantum annihilation and lifetime positronium in alumina powder.
Appl. Phys. A 48/4, 343-346 (1989) PACS: 78.70 82.65
- Pang D., Yang Z., Chen D., Quan M.X.:
Effect of polarizable atomspheres on superconductivity of the Y-Ba-Cu-O compounds.
Appl. Phys. A 48/4, 355-357 (1989) PACS: 74.70V
- Peinke J., Parisi J., Röhrich B., Mayer K.M., Rau U., Clauß W., Huebener R.P., Jungwirth G., Prettl W.:
Classification of current instabilities during low-temperature breakdown in germanium.
Appl. Phys. A 48/2, 155-160 (1989) PACS: 05.45 72.20 72.70
- Pensl G., Schulz M., Hölzlein K., Bergholz W., Hutchison J.L.:
New oxygen donors in silicon.
Appl. Phys. A 48/1, 49-57 (1989) PACS: 71.55F 81.40 73.40
- Pozela J., Namajunas A., Tamasevicius A., Ulbikas J.:
Quantitative characterization of chaotic instabilities in semiconductors.
Appl. Phys. A 48/2, 181-188 (1989) PACS: 72.20 72.70 06.00
- Rauschenbach B., Posselt M., Küchler R.:
Ion beam mixing of Al/Fe binary systems.
Appl. Phys. A 48/4, 347-354 (1989) PACS: 61.80 68.35
- Sakata I., Yamanaka M., Okazaki S., Hayashi Y.:
Relationship between optical and structural properties of hydrogenated amorphous silicon.
Appl. Phys. A 48/4, 295-304 (1989) PACS: 61.40 73.60 78.30
- Schöll E.:
Theoretical approaches to nonlinear and chaotic dynamics of generation-recombination processes in semiconductors.
Appl. Phys. A 48/2, 95-106 (1989) PACS: 72.20H 72.20 05.45
- Segura A., Martinez-Tomas C., Casanovas A., Cantarero A., Martinez-Pastor J., Chevy A.:
Carrier scattering mechanisms in p-type indium selenide.
Appl. Phys. A 48/5, 445-450 (1989) PACS: 72.10
- Solmi S., Cembali F., Fabbri R., Servidori M., Canteri R.:
Dependence of anomalous phosphorous diffusion in silicon on depth position of defects created by ion implantation.
Appl. Phys. A 48/3, 255-260 (1989) PACS: 61.70 61.80
- Song X.N., Seiler D.G., Loloee M.R.:
Nonlinear oscillations and chaotic behavior due to impact ionization of shallow donors in InSb.
Appl. Phys. A 48/2, 137-141 (1989) PACS: 72.20H 72.80 72.20
- Spangler J., Brandl A., Prettl W.:
Sequence of different types of nonlinear current oscillation in n-GaAs.
Appl. Phys. A 48/2, 143-147 (1989) PACS: 05.40 72.70 72.20
- Teitsworth S.W.:
The physics of space charge instabilities and temporal chaos in extrinsic photoconductors.
Appl. Phys. A 48/2, 127-136 (1989) PACS: 05.45 72.20
- Ursu I., Nistor L.C., Teodorescu V.S., Nistor S.V., Mihailescu I.N., Kolesnikov N.N., Konov V.I., Kulakov M.P., Starodunov Yu.H., Chapliev N.I., Shub V.E.:
Damage studies in cubic ZnSe single crystals grown from melt.
Appl. Phys. A 48/5, 451-456 (1989) PACS: 61.80
- Verbruggen A.H., Stoll H., Heeck K., Koch R.H.:
A novel technique for measuring resistance fluctuations independently of background noise.
Appl. Phys. A 48/3, 233-236 (1989) PACS: 06.00 07.00 61.70
- Wang K.-M., Liu X.-J., Wang Y.-H., Shi B.-R., Liu J.-T.:
Mean projected range of ions in homogeneous materials.
Appl. Phys. A 48/3, 241-244 (1989) PACS: 29.70G 61.80 79.20
- Weller A., Thomas P., Feldmann J., Peter G., Göbel E.O.:
Model calculations of diffusion limited trapping dynamics in quantum well laser structures.
Appl. Phys. A 48/6, 509-515 (1989) PACS: 73.20D 78.55 78.47
- Wichert Th., Deicher M., Gröbel G., Keller R., Schulz N., Skudlik H.:
Indium-defect complexes in silicon studied by perturbed angular correlation spectroscopy.
Appl. Phys. A 48/1, 59-85 (1989) PACS: 61.70 81.40 76.80
- Yamada K., Miura N., Hamaguchi C.:
Chaotic conductivity oscillation in n-type Si in high magnetic fields.
Appl. Phys. A 48/2, 149-153 (1989) PACS: 05.40 72.70 79.20
- Zandbergen H.W., Groen W.A., Tendeloo G.van, Amelinckx S.:
High-resolution electron microscopy and electron diffraction on $Bi_2Sr_{2-x}La_xCa_xCu_{1+x}O_{8+2x+6}$.
Appl. Phys. A 48/4, 305-314 (1989) PACS: 74.70
- Zundel T., Mesli A., Muller J.C., Siffert P.:
Boron neutralization and hydrogen diffusion in silicon subjected to low-energy hydrogen implantation.
Appl. Phys. A 48/1, 31-40 (1989) PACS: 66.30 61.70

Surfaces, Interfaces and Layer Structures

- Adegboyega G.A., Poggi A., Susi E., Castaldini A., Cavallini A.:
Schottky contact barrier height enhancement on p-type silicon by wet chemical etching.
Appl. Phys. A 48/4, 391-395 (1989) PACS: 73.30
- Akkad F.E.I., Ragaie H.F., Abdel Naby M.:
Properties of RF sputtered Zn_xCd_{1-x} S thin films.
Appl. Phys. A 48/5, 493-495 (1989) PACS: 73.60F 78.65 81.15
- Al-Refaie S.N.:
Dielectric and interfacial properties of InP plasma-grown oxides.
Appl. Phys. A 48/6, 575-582 (1989) PACS: 73.40R 73.60
- Altkorn R.I., Andreshak J.C., Gupta A.:
Temperature measurement during laser heating of thin films using a temperature-sensitive phosphor.
Appl. Phys. A 48/3, 273-276 (1989) PACS: 07.20 42.60 44.50 78.55
- Bäuerle D.:
Laser-induced formation and surface processing of high-temperature superconductors.
Appl. Phys. A 48/6, 527-541 (1989) PACS: 74.70 42.60 81.10
- Campbell E.E.B., Ulmer G., Bues K., Hertel I.V.:
Analysis of ionic fragments from 308 nm photoablation of polyimide.
Appl. Phys. A 48/6, 543-547 (1989) PACS: 79.20D 82.80
- Chen J.M., Zheng Y., Chen G.L., Ren C.X., Yang J., Xie L.M., Zou S.C.:
Study of interaction between ZrO_2 (YSZ) substrates and $YBa_2Cu_3O_{7-x}$ superconducting films.
Appl. Phys. A 48/3, 277-281 (1989) PACS: 74.70 66.30 68.20 68.48
- Czekaj D., Hollmann E.K., Kozirev A.B., Volpias V.A., Zaytsev A.G.:
Cathode etching rate in abnormal glow discharges.
Appl. Phys. A 48/6, 573-574 (1989) PACS: 79.20 52.00
- Eispüler A., Suhr H.:
Deposition of thin rhodium films by plasma-enhanced chemical vapor deposition.
Appl. Phys. A 48/4, 373-375 (1989) PACS: 81.15G 52.90 68.55
- Gnaser H., Hofer W.O.:
On the emission of neutral clusters in sputtering.
Appl. Phys. A 48/3, 261-271 (1989) PACS: 79.20N 36.40
- Hwu J.-G., Chuang J.-B., Fu S.-L.:
Constant bias-temperature and constant charge-temperature agings for silicon oxide films of MOS devices.
Appl. Phys. A 48/4, 377-383 (1989) PACS: 73.00
- Jin S., Atrens A.:
Nature of oxygen in the passive film on stainless steels in 0.1M NaCl solution.
Appl. Phys. A 48/4, 385-389 (1989) PACS: 68.45 81.60
- Jovicevic S., Konjevic N., Chapliev N.I., Konov V.I., Pimenov S.M.:
 CO_2 laser-induced plasma formation on a copper surface covered by dielectric particles.
Appl. Phys. A 48/3, 283-287 (1989) PACS: 61.80B

- Karthikeyan J., Sreekumar K.P., Venkatramani N., Kurup M.B., Patil D.S., Rohatgi V.K.:
Effect of process parameters on the properties of plasma sprayed superconducting $Y_1Ba_2Cu_3O_{7-x}$ coatings.
Appl. Phys. A 48/5, 489-492 (1989) PACS: 74.70 52.75 81.20
- Konuma M., Stützel H., Kuhl J., Bauser E.:
Laser-induced chemical etching of silicon in NF_3 atmosphere.
Appl. Phys. A 48/5, 465-469 (1989) PACS: 81.60 82.60
- Lee T.D., Lee H.W., Kim J.K., Park C.O.:
Surface structures on crystalline silicon irradiated by 10 ps laser pulses at 694.3 nm.
Appl. Phys. A 48/5, 475-479 (1989) PACS: 79.20D 81.40 42.80 37.35
- Lengfellner H., Betz J., Renk K.F.:
Preparation of Ti-Ba-Ca-Cu-O thin films by diffusion of Ti into laser-evaporated $Ba_2Cu_3O_x$ films.
Appl. Phys. A 48/5, 501-502 (1989) PACS: 73.60K 74.70 74.75
- Pérez Méndez M., Fayos J., Briones F.:
Determination of In-plane lattice parameters of InAs/AlAs strained-layer superlattices by X-ray precession camera.
Appl. Phys. A 48/5, 471-473 (1989) PACS: 78.50G 68.55
- Schölch H.P., Fickenscher P., Redel T., Stetter M., Saemann-Ischenko G., Benker W., Hartmann W., Frank K., Christiansen J.:
Production of $YBa_2Cu_3O_{7-x}$ superconducting thin films by pulsed pseudospark electron beam evaporation.
Appl. Phys. A 48/4, 397-400 (1989) PACS: 74.70 81.15 41.80
- Sun D.C., Yu Z.Q., Li F.M., Du Y.C., Wang H.:
Rapid growth of ultra thin SiO_2 films by a large-area electron beam.
Appl. Phys. A 48/6, 567-571 (1989) PACS: 52.80 79.20 81.60 68.55
- Teixeira S.R., Freire F.L., Jr., Baumvol L.J.R.:
Interdiffusion, reaction, and stability in a thin film iron-aluminium bilayered system.
Appl. Phys. A 48/5, 481-488 (1989) PACS: 68.55N 68.35
- Ugolini D., Eitle J., Oelhafen P., Wittmer M.:
Amorphous hydrogenated carbon films on semiconductors: I. Electronic properties of the interface.
Appl. Phys. A 48/6, 549-558 (1989) PACS: 79.60 73.40 73.60 71.25
- Wittke W., Hatta A., Otto A.:
Efficient use of the surface plasmon polariton resonance in light scattering from absorbates.
Appl. Phys. A 48/3, 289-294 (1989) PACS: 42.78D 78.30 78.65 82.65
- Wittmer M., Ugolini D., Eitle J., Oelhafen P.:
Amorphous hydrogenated carbon films on semiconductors: II. Microstructural properties of the interface.
Appl. Phys. A 48/6, 559-566 (1989) PACS: 73.40 73.60 68.35 45.30
- Xie Y.-L., Li H., Zhou Y.-L., Chen Z.-H., Yang G.-Z., Gu S.-J.:
Bolometric observation of nonradiative decay of surface plasmons in silver.
Appl. Phys. A 48/5, 497-500 (1989) PACS: 07.60 07.62 78.65